

SHOW-ME-STATE FOOD, BEVERAGE & FOREST PRODUCTS MANUFACTURING INITIATIVE *Report to the Governor*



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INTRODUCTION



The food, beverage, and forest products sectors make up roughly a third of Missouri's economy. Overall, these sectors and the value-added industries that support them represent a significant portion of the economic life throughout much of Missouri.

A 2016 report by Decision Innovation Solutions (a co-author of this report) established the economic contribution of Missouri agriculture and forestry. In 2016, agriculture, forestry, and related industries contributed:

- \$33.0 billion in value-added
 - \$88.4 billion in sales minus \$55.4 billion in inputs
- 378,232 jobs
- \$17.5 billion in labor income
- \$2.2 billion in state/local taxes
- \$4.0 billion in federal taxes

Of the \$33.0 billion in added value from the agriculture, forestry, and related economic activity:

- Crops, Livestock, Forestry, and Fisheries Production contributed: \$9.4 billion
- Agriculture Inputs and Services contributed: \$5.0 billion
- Food and Related Products Manufacturing contributed: \$15.5 billion
- Forestry Products Manufacturing contributed: \$3.2 billion

Recognizing the importance of the sector, the Missouri Agricultural Foundation commissioned a study by Teconomy Partners LLC to examine ways in which the state could increase the value from its agricultural and forestry resources. The study recommended three focus areas:

- 1. Regional Food Systems:** Enhance food value chains at a regional and local level across Missouri and facilitate and accelerate the development of regional value-added food product manufacturing businesses.
- 2. Foods for Health:** Build a new, research, and innovation-driven food industry for Missouri rooted in advanced nutritional

sciences, expansion of food science capabilities, and an applied clinical and translational research program.

3. Enhanced Commodity Utilization:

Develop enhanced value-added processing activities for key commodities, grains, dairy products, eggs, and livestock.



Lieutenant Governor Mike Kehoe signed Executive Order 19-11 to establish a 22-member task force charged with “Developing an operating plan to leverage existing activities and programs in food and beverage processing and manufacturing, including a proposal for Missouri investment”. The task force included seven voting members, consisting of the Lieutenant Governor (Chair), the Vice-Chancellor and Dean of the University of Missouri College of Agriculture, Food, and Natural Resources, the Director of the Missouri Department of Agriculture, Chair of the Senate Agriculture, Food Production and Outdoor Resources Committee, Chair of the House of Representatives Agriculture Policy Committee, a representative of Missouri Farm Bureau, and a representative of Missouri Farmers Care.

In addition to these seven voting members, the task force also included 15 non-voting members selected from key organizations and businesses across Missouri. After an initial organizing meeting, the group conducted a series of listening sessions. Former

Congressman Kenny Hulshof facilitated these sessions. The sessions included one at the Missouri State Fair, designed to capture a wide range of views and ideas. Three additional sessions then followed, each focused on one of the specific recommendation areas. The listening sessions brought together over 150 thought leaders from around the state, including commodity and other agricultural organization leaders, business operators,

academic and Extension staff, state agency leaders and personnel, and several others.

These groups were asked essentially two basic questions; 1) what are the constraints holding business and economic advancement back, and 2) what actions, be it research, regulatory relief, infrastructure or additional expertise are needed to take the state's food, beverage, and forest products to a higher level.

LISTENING SESSION SUMMARY



The listening sessions brought out many of the often-discussed issues related to the expansion of Missouri's food, beverage and forestry sectors: adequate labor or workforce, education, lack of connections or network, communication among stakeholders, technical assistance, access to capital, clarity of the regulatory process and little opportunity to co-pack products. However, a further drill-down during these sessions identified key issues that can provide opportunities for Missouri's agricultural and forestry industries to grow. The following paragraphs provide a summary of the major themes brought out in the listening sessions, while the attached appendix allows for an in-depth look at the issues raised at the listening sessions.

EXPAND MISSOURI'S TRADITIONAL AGRICULTURAL COMMODITIES

Missouri is well known for developing cattle that possess superior genetics. This can be capitalized upon through heifer retention, sex-sorted semen, and new research to continue to improve and build on a positive reputation in the cattle industry across the U.S. These opportunities exist for cattle producers of all sizes – even small operations can find a niche market or procure high quality heifers to continually improve cattle genetics in the state.

Several listening session participants suggested the need for the state to develop its own cattle feeding facilities as well as large scale packing plants. Consensus, however, built around establishing smaller scale facilities throughout the state, capable of harvest and carcass breakdown with an eye toward more specialty products, not commodity beef production. Grass-fed, organic or more niche, high value products – possibly with a focus on local restaurant markets – were



viewed as being a more achievable goal than development of a 500,000 head slaughter facility. Participants wanted to learn more from the Valley Oaks processing shutdown and the pushback against progressive value-added processing in the state.

Ideas for retaining more cattle in Missouri for processing included creating cooperatives and leveraging other assets and easing obstacles to incent cattle to stay in Missouri. The sessions elaborated on Missouri assets that could be leveraged as the cattle industry grows and included plentiful water supplies and an abundance of cropland to apply manure, which provides additional revenue/cost savings to livestock producers and reduces the cost of production for crop producers.

Swine production was also highlighted since a large proportion of Missouri's hogs are destined to be finished in another state. Finding ways in Missouri to partner with others in the industry, like

processors or producers, could result in more hogs staying in Missouri to be fed and provide additional demand for the corn and soybeans raised in the state.



Many of the listening sessions highlighted the accomplishments that have occurred in value-added projects in Missouri agriculture. Both the ethanol and biodiesel industries were highlighted as success stories related to increasing value to Missouri's largest crops. Beyond the direct value-added success brought by the bioenergy expansion, these examples provide innovative ways to assemble investors around a developing industry, like the use of new generation cooperatives. The new generation cooperative model allowed Missouri's farmers to invest in and benefit from the value-added ventures, and this approach can be a possible model for other new value-creation opportunities.

Currently, six majority farmer-owned plants operate in the state. These plants produce approximately 300 million gallons of ethanol and 825,000 tons of distillers grains. According to a University of Missouri Commercial Agriculture study, Missouri's corn production industry generated \$4.3 billion in economic output in 2011, sustained 65,960 jobs and created \$1 billion in added value for Missouri. Missouri's corn industry also stimulated approximately \$112 million in state and local taxes and \$201 million in federal taxes. In 2011, the direct, indirect and induced effects of Missouri's ethanol industry generated \$1.1 billion in economic output, sustained 1,575 jobs and added \$162 million in value to the state's economy. Additionally, the Missouri ethanol industry stimulated approximately \$15 million in state and local taxes to Missouri and \$21 million in federal taxes.

The development of the biodiesel industry in Missouri has provided support to soybean farmers across the state. Missouri currently produces 200 million gallons of biodiesel annually with 170 million gallons per year coming from soybean oil and 30 million gallons per year from animal fats. Based on a recent impact analysis, it is estimated that the soy-based biodiesel results in \$210 million of valued added activity for the state and supports 1,968 jobs. The animal fat biodiesel production is estimated to contribute \$37 million in value added activities and supports 350 jobs.

Despite these bio-based energy success stories, more than one-third of the Missouri corn crop and an even larger proportion of the soybean crop continues to leave the state. New opportunities and innovations to increase profits for Missouri's agriculture are needed to impart wealth throughout rural Missouri. Whether it is increased access to bioenergy plants, expansion to Missouri's livestock production or other novel uses, Missouri agriculture will benefit from a focused effort to expand manufacturing capacity.

"Buy local first" was often cited as a way to increase demand for Missouri-produced agricultural products. For example, the use of Missouri biofuels in Missouri's public transportation fleet could result in new soybean crush facilities and/or ethanol production. The additional soybean meal or DDGs production would support expanding livestock production within Missouri.

Repeated comments focused on the success of attracting new operations to locate in Missouri. Better coordination of current efforts to recruit new business was often cited as a way to increase the degree of success.

There is a plentiful supply of wood in Missouri (American white oak) which is a prime material for making staves (for whiskey aging barrels). Healthy hardwood forests (primarily in southern Missouri) are the source of many types of high-quality wood used for furniture. According to several listening session attendees, the wood is so plentiful in fact, that much of the wood that could be sustainably harvested is left to die on the stump, rendering it useless for higher valued sales channels and posing a fire hazard.

INVEST IN NEW MISSOURI-GROWN COMMODITIES

While Missouri has many strong areas in the agriculture and forestry industries, there is always room for expansion, diversification, and

new opportunities. For production agriculture, opportunities discussed to diversify farming operations included production of industrial hemp.

The federal Agricultural Improvement Act of 2018 allows states to develop plans to allow for commercial hemp production. Missouri recently released its proposed plan for hemp production within the state. While much research and market development is needed before hemp becomes a major cash crop in the state, it does represent a new opportunity and challenge for the state.

New specialty crops like fruits and vegetables are attractive to Missouri producers, but it was recognized that they require different equipment, practices and sales channels. Required assumptions, such as expected sales prices for building sound business plans, are often difficult to obtain, complicating access to capital. From a crop production standpoint, two issues were identified that were large risk factors for producing new crops. The first is unfamiliarity of neighbors using herbicides near crops susceptible to drift and the general lack of crop insurance for many specialty crops.



The listening sessions often brought up a lack of consistent communication between government, education, research, production, and processing entities across the state. It is felt that there is a tendency to work in silos, creating challenges for new or existing businesses to navigate at startup. There was a general sense of failed communication among all the stakeholder areas. Better communication across all agricultural stakeholders was highlighted as just one area where better collaboration would further Missouri agriculture. Coordinated communication was just one example provided that would increase the amount and quality of information reaching consumers.

A recurring theme in these sessions was the disconnect between consumers and producers of agricultural and forest products. Consumers often say they want products such as organic or cage-free, but when presented these options at the store, many will still purchase the more affordable option. To properly meet demand, producers want to give their customers what they will buy which is not necessarily always what they think they want. This issue is not new. The agricultural industry has long been discussing how to best reconcile what consumers (think they) want, what they actually buy and what can be grown and produced sustainably, and profitably, for the long-term. Considerable effort should be spent determining how to address this challenge.

A strength in Missouri agriculture is related to the many marketing cooperatives operating throughout the state, several of which have been in existence for decades. In the context of the listening sessions, the size of marketing cooperatives was a valid question – are more “entrepreneurially-sized” or large-scale cooperatives needed/desired? Marketing cooperatives were also suggested as a method for establishing “food for sale” barns in which advance notice could be communicated on what produce would be offered for sale. These would be different than traditional farmers’ markets in that products would be required to meet certain grading standards so that larger buyers could confidently buy products that met their needs. Attendees felt that having this type of “barn” would also help with scale-up and help participants see a clearer path to longer-term, more stable markets. Financial incentives for forming and operating a cooperative were deemed important.

The Missouri pet food industry has been a strong asset and additional ways to capitalize and expand on that sector should be considered. Pet ownership continues to increase, which is significant since many pet owners consider their pets “family” and treat them to higher-valued food products and services.

The diversification of Missouri agriculture was mentioned often during the listening sessions. The opportunities discussed included indoor vegetable production to provide year-round jobs in a controlled environment instead of seasonal work, industrial hemp/CBD oil, algae growth for bioreactors, and more. Additional value-added components could include wind energy,



traveling biomass processing for marginal acres and grassland, or regional cooperation for key components in the supply chain such as cold storage.

CREATE NEW VALUE-ADDED PRODUCTS AND PROCESSES

Issues related to value-added products and supply chain management received a fair amount of discussion. Most agricultural producers do not have expertise in this area and often find themselves frustrated at impediments, and in some cases, failure to successfully take their products to market. Supply chain issues blamed for most failures include logistics, regulations, value chain understanding, adequate market research, packaging and lack of capital.

Community “test kitchens” were also identified as important for proving and perfecting processes. These test kitchens could potentially be established in schools during off hours, renovated commercial space or commercial kitchens built specifically for functioning as a test kitchen.



The challenge with test kitchens is the actual long-term management of hours of operation, tenants and complying with all relevant rules and regulations.

The permitting process, regulatory red tape and a county-level maze of differing regulations have been deterring expansion in the agriculture industry. An expedited siting process was suggested to find communities open to expansion and get pre-approved sites ready for a shorter time to execution. The ability to establish county-specific regulations is also seen as a challenge for producing and marketing farm-produced (often “niche”) goods.

OTHER ITEMS FOR CONSIDERATION

All participants agreed that the Missouri Agriculture and Small Business Development Authority (MASBDA) provides a valuable service in supporting agriculture and small businesses.

Discussion surrounding inland ports and issues related to river commerce up and down major rivers in and near Missouri took place. Some Missouri legislators are focusing on inland ports and how to improve their use for commerce. The Missouri River channel north of Kansas City has not been maintained to ensure conditions necessary for navigation.

In addition to deteriorating roads and bridges, municipalities were another piece of infrastructure that was discussed. When looking at site selection and the option to expand or build new processing facilities, many companies are forced to help fund upgrades of municipality infrastructure to handle the volume of rinse water, wastewater, etc. In some instances, it may be cheaper for them to start elsewhere rather than funding local upgrades.

Another area of discussion during the listening sessions was the commercial trucking industry. While there is an agriculture exemption allowing 18- to 20-year old’s to drive semis, the forestry industry does not have that same exemption. Therefore, the forestry industry loses out on many potential workers between 18 and 21 years old, because by the time these workers turn 21 they have likely started down a different career path. If the forestry industry must continue without the ag exemption, then an apprenticeship program could be beneficial to capture those wanting to go into trucking right after high school.

Sound business planning strategies were discussed at the listening sessions. The use of Extension to offer assistance to educate producers and business owners in prioritized areas, use of farmers markets to refine business plans and offering of “value-added” grants to help producers market and encourage processing of specialty products were discussed.

The access to affordable broadband in rural areas surfaced at each of the listening sessions to better position rural Missouri’s infrastructure. Participants highlighted the need for better high-speed broadband access than is currently available.



THE PATH FORWARD



The Teconomy report led the group to three strategic paths and a collection of tactical efforts. The first strategic path essentially adopts the concept of a regional food systems initiative with the development of a Missouri Food Entrepreneur Network (MO-FEN). For scale purposes as well as a readily understandable approach to the problem, the task force felt the concept of a major thrust toward improving the state launch of start-up food companies was a good strategy to accelerate growth in the value-added agriculture arena.

The second strategy area is the development of the Missouri [Food, Feed, Fiber, Fuel, and Forests]

Consortium, or MO-5. The vision for this MO-5 Consortium is a hybrid state/academic/business structure nimble enough to rapidly respond to challenges to the accelerated growth for existing Missouri agribusinesses, like – but not limited to – issues of public perception and workforce limitations.

The third strategic focus, coined the ‘Healthy Foods Initiative,’ is dedicated to creating a new industry for Missouri at the nexus of agriculture and health. This new business platform around food, feed, and health, will be inspired by innovations involving Missouri commodities that drive healthy benefits for humans and animals.



The Missouri Food Entrepreneur Network (MO-FEN) concept is for a hub and spoke network to exist among the state's higher learning institutions, the Missouri Department of Agriculture, state agriculture organizations, and University of Missouri (MU) - Extension. The Food Entrepreneur Network is a major initiative for the state and as such, will need a major visioning and planning effort.

The following first steps are recommended to lift the MO-FEN initiative:

- 1. Hire a state-wide process authority:** The University of Missouri is currently committed to the addition of a process authority in their Food Science program to add expertise in validating food processing and equipment.
- 2. Establish an inventory of expertise and facilities across Missouri:** The facilities will include resources at the state's colleges and universities. However, expertise will not be limited to those institutions, but should also include resources at the state agencies and MU-Extension.
- 3. Create a coordinated effort and business model to interconnect statewide food processing interests:** With a hub-and-spoke model, establish a system whereby entrepreneurs may access the network for rapid assistance concerning challenges of launching a food business.
- 4. Hire a director and staff to implement the state-wide network**

Exact management and even the administrative home of this organization needs more exploration

and discussion, but the concept is for a coordinated network with a broad geographic spread. Located at the hub, staff from the Missouri Department of Agriculture, food scientists, food safety specialists, and food process engineers from the University of Missouri – Columbia, University Extension, and the state Department of Economic Development would be committed to expanding the biomanufacturing industries of Missouri. Spokes extending from the hub would end at other higher education institutions, each capable of delivering a specific function to help aspiring food business owners. For example, Northwest Missouri State University will have a processing lab able to help co-pack specialty products. To capture benefits of Extension's presence in every Missouri county, MU Extension offices will be tied into the network by connecting with a nearby institution. So, if the Cole County Extension office were to get a food-related business question, the Extension agent could direct the question into the MO-FEN by first contacting the Lincoln University MO-FEN spoke office staff member who is further supported by a team located at the hub.

The vision is for the hub to provide services and advice needed at each of the separate spoke locations, but an individual spoke may not have the required expertise. An example of this would be a process authority located at the hub, which would have expertise in regulatory compliance, safety, process design and label development. Other spokes will have complementary expertise in marketing, business plan creation, and financing. The localized skills are intended to complement and coordinate, not duplicate services.

The individual spokes will likely have widely varying capacities, which will naturally determine their facilities and accompanying capabilities. The bootheel, for example, may want to consider the construction of a community/cooperative packing facility for fruit and vegetable processing. The southwest part of the state may wish to consider an appropriately sized multi-species animal harvesting and breakout facility or dairy food processing. Viticulture and other wine industry needs could also be part of the focus. The larger urban areas in Kansas City and St. Louis may want to consider facilities more oriented toward food kitchen/processing. The Columbia/Jefferson City area may also want to consider the food

processing approach but may need to consider animal harvesting.

Oilseed processing facilities focused on the production of specialty oils may be options for the northern spokes. There may be some facility needs that will be common to more than one spoke or region. Co-packing was an idea that came up several times in the listening sessions. Co-packing as part of the spoke is an option, but it may be through rental of other local facilities to new business startups. Staff at each of the spokes will need technical expertise appropriate for the area's needs but will likely include specialization in food science, processing, transportation logistics,

cold storage options and nutrition, as well as knowledge of local markets.

The advantage of housing these processing centers within the state's higher learning institutions are the hands-on learning opportunities across a broad range of subject areas. Placing students in these real-world settings will give chances for training that would otherwise not be possible. From food chemistry to business development, from marketing to entrepreneurship, students and faculty will have learning laboratories not otherwise available, creating a real win-win for the state.

THE MISSOURI FOOD, FEED, FIBER, FUEL & FORESTS INSTITUTE (MO-5)



The MO-5 name reflects a commitment to expanding opportunities for agribusinesses that manufacture products in support of Missouri's big 5 - food, feed, fiber, fuel and forest - commodity systems. To oversee this initiative, the MO-5 requires naming a chief officer with funding for a supporting cast that is committed to achieving the economic prosperity suggested in the Teconomy feasibility study for Missouri. The MO-5 two-pronged approach will:

1. Help existing Missouri agribusinesses accelerate growth.
2. Actively recruiting successful bio-based enterprises into our state.

An effective MO-5 will expand opportunities for Missouri's commodities and forests, contributing to the increased profitability and economic viability of the agriculture and natural resource enterprises of the state.

MISSOURI AGRIBUSINESS EXPANSION

Scale-up Assistance for Successful Food Businesses.

As a food business grows, it needs access to processing and preservation equipment capable of manufacturing at greater volumes, including greater refrigeration, transportation and storage capacity. There is currently a shortage of medium- to large-scale food processing capacity in the state. To accelerate growth of a successful agribusiness, the MO-5 initiative must assist startup companies with access to the capital needed for expansion. Furthermore, in coordination with MO-FEN, the MO-5 should provide access to regional processing facilities throughout Missouri that can co-process, package and store key commodities for any location. For example, livestock processing capacity at the University of Missouri, dairy processing in Southwest Missouri, grape and wine processing at Missouri State University, specialty crop processing in the bootheel, grain and biofuel processing in Northern Missouri, and the proposed crop and livestock processing at the Northwest Missouri State University Agricultural Learning Center.

PROMOTE "BUY MISSOURI" AND 'MISSOURI GROWN' BRANDS.

As Missouri agribusinesses grow under a Missouri Grown or Buy Missouri brand, MO-5 must create conduits to retail outlets and farmers markets for these products, both locally and nationally.



WORKFORCE DEVELOPMENT PROGRAMS. Any sector of business will only be as successful as the quality of those workers it employs. A workforce for food, feed, forest, fuel or fiber businesses must be knowledgeable to many issues common for manufacturing, including trainings and schools for worker safety, large equipment operation, logger safety, commercial driver's license, food safety and HACCP, and good agriculture, laboratory, and manufacturing practice to name a few. MO-5 must help prepare a workforce for these bio-based industries, establishing pathway programs that involve an apprenticeship philosophy in partnership with local 4H, FFA chapters and community colleges to ready students for instant employment in the MO-5 manufacturing sectors.

REGULATORY HURDLE LOWERING.

A number of regulatory hurdles were identified during the listening sessions that industry leaders described as limiting to agribusiness growth. For example, one must be 21 years old to be issued a commercial driver's license and work in the forestry industry.

MO-5 must work with legislators and regional politicians to lower those barriers to business expansion for these sectors.

RECRUITING AGRIBUSINESSES TO MISSOURI

Business recruitment. The MO-5 chief officer will work with Missouri agencies and the governor's office (Agriculture, Economic Development, Transportation, local governments) to identify a recruiting coordinator for this industry sector. This coordinator will engage with state agencies, commodity groups, and local economic development organizations to create attractive packages for drawing businesses to Missouri.

Asset Map of Missouri. Businesses considering a

relocation will be interested in understanding the benefits of a move to Missouri. The MO-5 recruiting coordinator will establish a series of maps with statewide amenities. For example, any company with MO relocation interests will need transportation information concerning access to airports, road-, rail- and waterways. Also, of importance will be details of utilities and other public amenities, like local and state tax, sewer and power incentives, and financial institutions. The companies will also need information on worker access and education and training support from nearby schools and colleges. To be competitive, the MO-5 recruiting coordinator will prepare detailed maps across Missouri to identify these and other asset locations to position the state competitively when attracting new business to Missouri.

Communications. Agribusiness expansion has detractors who wish to mitigate its growth by promoting inaccuracies and embellishing falsehoods. These stories can create mayhem for any company wishing to grow or establish in Missouri. While industrial growth will contribute to economic prosperity for the state and region, the inaccurate claims can lead to frivolous lawsuits and derail any potential investor from strengthening a tie to Missouri. In an effort to manage these stories, the MO-5 will establish a communications team to be populated by science communicators from Missouri's agriculture and natural resource agencies and organizations. This team will unite to issue rapid responses to flawed claims and stories looking to limit agricultural growth in the state. This band of communicators will work together to provide accurate and fair information to the state and local communities, to be the voice of balance and reason to counteract those with an anti-agriculture agenda.

INNOVATION/SCIENCE – “HEALTHY FOODS INSTITUTE”



To begin the development and maturity of a healthy foods institute, the following steps are recommended:

- 1. Develop a multi-disciplinary approach from basic research to commercially viable products and services**
- 2. Identify those research interests engaged in this area:** This institute will need to be a combination of private industry and

public institutions, the coordination of developments for all segments of the food chain from plants to animals to humans.

- 3. Determine a process to identify products and services in demand by consumers:**

This research could include understanding consumer behavior related to trying and buying these new health-focused products.

A concept proposed in the Teconomy study was the opportunity for Missouri to establish a new industry based on healthy product innovations from Missouri commodities. The healthy foods institute would be a consortium of research and innovation entities, regulatory bodies, capital markets and industry associations. The scope of the institute would include developments in plant science and nutrition, animal production and health, and food science. It could also provide a food innovation center that works with industry to demonstrate new ideas.

FOOD SCIENCE INVESTMENT IN NEW PRODUCT DEVELOPMENT

Missouri's geographical shape and location provides a wide range of climatic and soil type growing environments. These "microclimates" enable trials of new specialty crops to increase the state's diversity by producing a wider variety of food and beverage products. This is important to lessen our dependence on any singular commodity which would allow the agriculture industry to become more nimble in adjusting to alternative crops should any commodity be compromised.

Research is ongoing in public institutions and private industry. Missouri is missing the translational piece that moves a product or service to the point it can actually have a market impact.

Notwithstanding that the research is available, without the step of translation to commercial ventures, successful product or service introduction to the market is limited.

FOODS FOR NUTRITION, HEALTH AND MEDICINE

The institute would facilitate the coordination of developments for all segments of the food chain from plants to animals to humans. Two areas mentioned regarding plants were the growth and feeding of known varieties cultivated for food and health products and the development of new plant varieties for both food and health products. The first area discussed was the development or identification of value trait animals (i.e. grass fed, organic). The second area is somewhat related to plants, which is that what animals eat can be translated into product features. For instance, feeding flax seed meal to layers can increase the Omega 3 levels in the eggs produced.

Developing plants for human nutrition and developing animals or animal products for human nutrition is the foundation of agriculture. The institute could be the source of innovation in continuing the food for health platform, facilitating new developments in producing agricultural products that help in the prevention or treatment of diseases.

CHARTING A PATH TO SUCCESS



Members of the Missouri Food, Beverage and Forest Products Manufacturing Task Force will continue to meet and begin the process of implementing the strategies contained in this report. Upcoming efforts will focus on identifying distinct objectives and mapping a path forward for the Missouri Food Entrepreneur Network (MO-FEN) and Missouri Food, Feed, Fiber, Fuel and Forests Consortium (MO-5). The Healthy Food Initiative

will take a parallel, albeit longer-term, track which utilizes expertise located at academic institutions throughout the state. Task force members will develop initial plans for each strategy which address staffing needs, potential industry partners, relevant regulatory/legislative issues and anticipated funding requirements. Future updates will provide a more detailed roadmap for each strategy.

APPENDIX, Listening Session Summarization

On June 28, 2019, Lieutenant Governor Mike Kehoe signed Executive Order 19-11 to establish a 22-member task force, charged with “developing an operating plan to leverage existing activities and programs in food and beverage processing and manufacturing, including a proposal for Missouri investment” among other things. A key part of gathering information to develop the plan was to organize and hold listening sessions in central Missouri to seek and obtain stakeholder thoughts, raise questions, voice concerns and discuss opportunities. In keeping with the three broad areas identified in the study by Teconomy Partners LLC, beyond a “kickoff” meeting at the Missouri State Fair on August 15, 2019, three listening sessions were held (two in Jefferson City and one in Columbia), each with a specific focus area. These areas are:

1. Regional Food Systems
2. Foods for Health
3. Enhanced Commodity Utilization

Detailed notes taken during general discussions and breakout sessions, sign-up sheets and audio recordings of all sessions and related breakout sessions were gathered and have been organized and electronically stored; these materials are available for future needs related to this effort.

2019.08.15, Sedalia (Missouri State Fair)

The primary reason for this session was to “kick off” the group of listening sessions and get input from fairgoers, most of whom in attendance were livestock and/or crop farmers. Approximately 95 people were in attendance, representing many aspects of production agriculture. Below are topics that generated the most discussion.

Trade and Inland River Waterways/Ports

Most discussion related to trade dealt with ongoing issues with China and the need to focus on opening new markets. Additional discussion happened regarding the status of the US-Mexico-Canada Agreement (USMCA, the update to NAFTA) and the need to have Trade Promotion Authority (TPA) for multi- and bilateral trade agreements. While expansion of the Panama Canal certainly improves trade flow, there were some concerns raised with China heavily investing in international ports.

Discussion surrounding inland ports and issues related to river commerce up and down major rivers in and near Missouri. Some Missouri

legislators are focusing on inland ports and how to improve their use for commerce. Channel north of Kansas City has not been maintained to necessary conditions for navigation

Agricultural trade is important to Missouri so issues surrounding actual trade barriers or other policies in place to hamper international trade often directly impact Missouri agriculture. This is despite locational advantages and an extensive, albeit aging, infrastructure in the U.S. in general and in Missouri in particular.

Flooding

Water management and flooding has been top of mind in agriculture during 2019. Conversation related to flooding started with questions about expediting the master manual on flood control to prepare for the next time large-scale flooding happens. Senator Blunt mentioned that he is keeping the discussion going on the southern basins and that a new rule by Department of the Interior to consider impact on people and property, not just wildlife, is needed. He also stated that the U.S. Army Corp of Engineers shouldn't do anything that we know will hurt people if we don't know that it will help wildlife.

Livestock

A fair amount of discussion happened related to livestock production and processing, particularly regarding the Garden City fire at the Tyson plant in August. Some in the room insinuated that loss of the “excess capacity” at Garden City should have had little impact on domestic cattle prices (there was excess “shackle space” nationally before fire), although there was mention that boxed beef went up after the fire and cattle prices down. Definitive conclusions as to why markets reacted this way was not offered nor referenced, but packer concentration was mentioned as a reason for odd market behavior.

Additional discussion took place regarding the number of cattle being shipped out of Missouri for processing despite having such large production of cattle. The number mentioned was that 1.7 million cattle are produced in Missouri, but only 100,000 (6%) are processed in Missouri. Missouri is regularly the 2nd or 3rd largest cow/calf producing state in the nation. An estimate by one person in the meeting suggests feeding of cattle in Missouri keeps \$300/head in the state.

Ideas for retaining more cattle in Missouri for processing included creating a cooperative and

leveraging other assets and easing obstacles to incent cattle to stay in Missouri. Elaboration on which Missouri assets which could be leveraged include:

- Plenty of water
- Models of successful cooperatives and cooperation between new and existing businesses
- Plenty of cropland to apply manure, providing additional revenue/cost savings to livestock producers and reducing cost of production for corn

Elaboration on which obstacles needed being eased include:

- Packer concentration with the ability to squeeze new entrants; without 80%+ committed supply prior to opening, a new processing plant will not survive
- Young producers can't stand dips with \$140/head losses

Rural Economies

A common issue in many Midwestern states historically reliant upon agriculture, fewer and larger farms is one reason for migration of populations from rural areas to urban centers. Concerns were raised that not enough people are staying in local communities and questions about how to inspire young people to realize that there are bright futures in Agriculture. When a young dairy farmer was introduced, other attendees applauded, signifying the consensus that young people are appreciated and efforts to help them succeed are a worthwhile endeavor. There were several FFA members in the audience.

2019.09.06, Jefferson City (Missouri Soybean Association)

The subject of this session was "Enhanced Commodity Utilization". Approximately 35 people were in attendance, representing many aspects of production agriculture and organizations that represent them. Below are topics that generated the most discussion.

Consumers

A reoccurring theme throughout this session was the disconnect between consumers and the agriculture and forestry production and processing industries. While consumers often say they want products such as organic or cage-free, when presented their options at the store many will still purchase the more affordable option. To properly meet demand, producers want to give their customers what they will 'buy' which is not necessarily always what they 'think' they want.

One opportunity to gather a better understanding of consumer demand is for the agriculture industry and various associations to have more interaction and collaboration with the grocery and restaurant associations. This would allow for a better understanding of the products and preferred nutritional qualities requested by the consumers, and provide insights to better market their products through labeling or packaging food to meet smaller family sizes. Another suggestion to gain more customer insights is to complete more firsthand consumer research by adding a Consumer Preference Panel at universities in Missouri.

As consumers appear to favor more locally-grown products, Missouri could expand the 'Buy Missouri' program that promotes products that are grown, manufactured, processed or made in Missouri. One hurdle to expansion of this program is that a lot of packing for Missouri products is done out of state.

Public perception of the agriculture industry is a challenge and producers need every opportunity possible to educate consumers. Opportunities such as agritourism, tours of facilities or plants are all ways to give people real world examples of their operation (Ex. How much water a golf course uses versus an ethanol plant each day). Identifying locations that the general public already attends is a great opportunity to teach them about agriculture, such as a display at the St. Louis Science Center.

In addition to face to face interactions with consumers, social media is another outlet that can be used for consumer education. This could be at the individual producer level or a social media campaign from associations or organizations such as Missouri Farmers Care. More proactive consumer education allows the agriculture industry to play offense instead of defense on topics of interest.

Consumer/public education is also needed for the forestry industry. Negative public perception on harvesting forests is causing tree mortality issues. Setting a goal to reduce the forestry mortality rate and educating the public on why that goal has been set is a growth opportunity for the industry.

Cattle

Missouri is known for their good reputation in cattle genetics and can capitalize on that with heifer retention, sex-sorted semen, and new research to continue to improve and build on their

positive reputation in the cattle industry across the U.S. Other opportunities for cattle producers exist within niche markets such as Wagyu genetics, or developing relationships with buyers, restaurants, etc. to sell direct. These opportunities exist for producers of all sizes – even small operations can find a niche market or procure high quality heifers to continually improve cattle genetics in the state.

Critical Mass

More collaboration across the agriculture and forestry industries would help obtain the critical mass needed to succeed. Two specific examples mentioned include the dairy and forestry industries. In the dairy industry, small to mid-sized producers are often at a disadvantage due to their smaller load size which sometimes can't be justified for a company to come pick up compared to a larger load. The forestry industry is also another example where more collaboration and sharing of resources could be beneficial. Companies could work together on sharing labor and equipment and rotating between sites.

Processing

The processing industry is an area that could provide more value-added in the State of Missouri for their proven strengths in major commodity production such as corn, soybeans, and cattle. The ethanol industry is struggling with the loss of ethanol tax credits and needing more trade and market access, however it was suggested that more consumer education as well as a carbon tax would be incentives to higher blends.

In the cattle industry, they have recognized that packers are currently set in their locations across the country and not as likely to expand into Missouri, however a kill plant could be a possible addition.

One major downfall for the processing industry in Missouri includes the labor issues that go along with processing facilities. The lack of an available workforce would suggest that immigration labor would be needed in order to add additional processing capacity in the state. One barrier is the lack of community support and willingness to accept the immigration labor force needed. Valley Oaks Farms was another example of pushback against progressive value-added processing in the state. Consumers say that they want local food, however they also protested it when it was actually in their local area. This continues to show a disconnect between what consumers think they want and what they will actually do and/or buy.

Site Selection

The permitting process and power at the county level have been deterring expansion in the agriculture industry. An expedited siting process was suggested to find communities open to expansion and get pre-approved sites ready for a shorter time to execution, similar to the Agri-Ready county designation currently offered by Missouri Farmers Care. However, one concern that several raised is that this allows more time for 'professional agitators' to work against any expansion or additional locations. It was suggested that an 'Agriculture SWOT team' could be started to create rapid response facts that are prepared for county commissioners to respond to questions or negative feedback.

Workforce

All across the agriculture and forestry industries, a labor force that is willing to work hard and do jobs that many people are not willing to do is crucial. However, issues raised for finding good labor included drug abuse in the workforce, unreliable transportation, work visa issues, and lack of interest for working nights and weekends. Some said that getting managerial level employees to rural areas is not an issue but finding lower level employees to train and retain can be difficult.

Another area of concern was the trucking industry. While there is an agriculture exemption allowing 18-20 year old's to drive semis, the forestry industry does not have that exemption. Therefore, the forestry industry loses out on many potential workers between 18 and 21 years old, and by the time they turn 21 they have likely moved on to a different career path. If the forestry industry must continue without the ag exemption, then an apprenticeship program could be beneficial to capture those wanting to go into trucking right after high school.

Higher-education Involvement

More collaboration across universities and agency coordination was suggested. It seems that there are currently competitive barriers between universities and colleges in the state and more collaborative research and use of resources would be beneficial. A consumer preference panel was also suggested to be developed at one or more locations across the state to provide better insights into consumer demand. Missouri Extension is another available collaborator as they are continuing to receive grants and are doing better than many other shrinking state extension services across the country.

Infrastructure

In addition to deteriorating roads and bridges, municipalities were another piece of infrastructure that was discussed. When looking at site selection and the option to expand or build new processing facilities, many companies are forced to help fund upgrades of municipalities to handle the volume of rinse water, wastewater, etc. In some instances, it may be cheaper for them to start elsewhere rather than funding upgrades.

New & Expanding Opportunities

While Missouri has many strong areas in the agriculture and forestry industries, there is always room for expansion, diversification, and new opportunities. For production agriculture, opportunities discussed to diversify farming operations included indoor vegetable production to provide year-round jobs in a controlled environment instead of seasonal work, industrial hemp/CBD, algae growth for bioreactors, and more. Additional value-added components could include wind energy, traveling biomass processing for marginal acres and grassland, or regional cooperation for key components in the supply chain such as cold storage. Access to credit or funding for new enterprises or start-ups would be beneficial to promote growth in those areas.

The pet food industry has been a strong point for the State of Missouri, and additional ways to capitalize and expand on that sector should be considered. Other ventures that could be expanded include the distilling industry with the reform of the alcohol tax to add additional value to Missouri's corn crop and the forestry industry's production of whiskey barrels.

At a higher level, opportunities exist in developing a closer relationship with the restaurant and grocery associations, encouraging more collaboration between the Department of Agriculture and Economic Development, and adding a position for a Chief Science Communicator to accurately present facts to the general public. Using historical MASBDA feasibility studies, additional research in looking at which projects did or did not work and why should be studied and communicated back to local innovators in the industry.

2019.09.09, Columbia (Bradford Research Center)

The subject of this session was "Foods for Health". Approximately 40 people were in

attendance, representing higher education, extension, state and local government and several private businesses. Below are topics that generated the most discussion.

Missouri's Potential for Diversity in Food Production

Missouri's geographical shape and location provides a wide range of climatic and soil type growing environments. These "microclimates" enable trials of new concepts at appropriate scale supporting efforts to increase the state's diversity by producing a wider variety of food and beverage products. Regional centers of expertise should be developed to take advantage of these microclimates.

Communication

A lack of communication between all the stakeholders in the foods for health focus area was frequently mentioned. Some examples mentioned were; sharing of information between universities, coordination between government agencies, moving new food production concepts from development to implementation. There is need for commonly accepted definitions of Foods for Health, Nutrition Agriculture, Better for Planet (Sustainability) and Less-Processed Foods. Participants agreed that the Food for Health focus area should include food for humans, animals and plants. For instance, how and what a plant is fed may affect the food animals eat and subsequently the humans who eat the products produced from the animals.

Communication in and with Government and Industry Associations

Producers, researchers and value-added processors all must deal with various regulators and state or local departments that tend to work in silos. Many entrepreneurs do not belong to advocacy associations, so there is a need to develop processes where all relevant parties are working together for the same goal. The development of the biofuel industry in Missouri was cited as a positive example.

Communication in and within Education and Research

There were numerous comments about the number and strengths of colleges and universities within the state conducting research in livestock and plant development, food science and food processing. However, sharing of information on

advances in plant, animal and human nutrition products and processes is limited. Some suggestions for enhancing communication include the development of regional pockets of expertise, inter-agency hiring, and promotion of food science education by sharing access to courses taught across all educational organizations.

Colleges and agricultural associations in Missouri should come together to develop a long-term strategic plan with “lofty” and common goals. One area mentioned was the development of effective public education, promotion and marketing programs for value trait products (i.e. organic, High Oleic, Omega 3s), and specialty crops.

Communication in and with Production and Processing

Missouri farmers are open to opportunities for diversification in crops and farming practices. However, the decision to produce a “value-added” crop such as High Oleic soybeans requires operational changes at the processor level to realize proper returns for both the producer and the processor. The coordination of these changes from plant science through to final product processing will be necessary.

Marketing and Consumer Education

Trends in consumer preferences have a huge impact on all stages of food production from plant development to value added processing. New consumer ideologies are affecting farming practices. There is an ongoing need to better understand consumer behavior and market needs to ensure the right products are available to meet the demand. Connecting the nutritional properties of food to health benefits will provide opportunities for further research and development of crops and animal-based products. Consumers, starting at a young age, need to be educated on agriculture and its importance to their health and wellbeing.

Some of the “health food” marketing methods and tactics used are inappropriate or misleading. A facility that provides product testing, evaluation of safe processing techniques and private label claim validation in Kansas was used as an example of opportunities to support the development of specialty foods, new and safer processing methods and building integrity in the food for health focus area.

Food for Health Institute

A concept mentioned in this session was the need for a “Food for Health Institute” which would be a consortium of research and innovation entities, regulatory bodies, capital markets and industry associations. The scope would include developments in plant science and nutrition, animal production and health, and food science. It could also provide a food innovation center that works with industry to demonstrate new ideas. This discussion supports the recommended MO-FEN hub and spoke concept discussed in the body of the report

Industrial Supply Chain

The challenges of introducing new products or process into the marketplace begin with developing a new product or process. Once you have determined a market potential, then what comes next, producing the product hoping there will be processing available or building the processing capability in anticipation of the input availability. This dilemma was referred to as the common “Chicken or the Egg” question. Some of the specific issues discussed were:

- New crops are attractive but require different equipment, practices and sales channels.
- Vertical integration, where producers create collectives that grow, process and market specialty crops or value trait animal products, can be a profitable way to produce foods for health.
- Any new crop or opportunity needs to be expressed in how it will impact the farmer.
- There is sometimes a backlash from producers and processors when faced with significant changes in production or processing practices.
- Specialty crops and specific trait value crops will require identity (source or characteristic) preservation. There are challenges in maintaining profitability in smaller scale processing operations or adding extra processes to preserve identity through to the marketplace.
- Developing products in the food for health arena should provide opportunities to keep more of the value-added dollars within or flowing into the state.
- An agriculture/business incubation center would support food for health businesses in early stages of development.
- The site selection and permitting process adds to startup costs and delays time to market.

From Research to Market

Research is ongoing in both public institutions and private industry. The public institutions have a different model than those who use the developments. Public research institutions are more risk adverse than private industry. There is a gap in translating research into new products and services. The current emphasis is for research that does not focus on introducing a new product or service to the market. Research needs to move from developing new forms of food to eat to food for health and ultimately food that fights diseases and nutritional issues.

There is a need to identify potential partners who will take intellectual property (IP) to market. The USDA ARS Office of Technology Transfer was given as an example of an entity charged with moving research discoveries to the marketplace. The University of Missouri Office of Tech Advancement experience with the development of “Beyond Meat” was mentioned as an example of a Missouri developed product successfully taken to market not staying in the state.

Funding and Incentives

All participants agreed that the Missouri Agriculture and Small Business Development Authority (MASBDA) provides a valuable service in supporting agriculture and small businesses. Some of the challenges in providing access to financing and capital discussed were:

- Industry funding sources are sometimes non-objective, and the result may be “holding” research.
- Need to develop a connection between venture capitalists and production agriculture
- Suggestion that the Missouri Department of Economic Development create a different set of standards for ag industry incentives.
 - Look at other states
 - Focus workforce development on veterinarians and food services

Additional Points

There were some points raised in the Columbia session that did not fit into the food for health focus area but merit listing for further consideration. They are:

- Food Waste (Up-Cycling)
 - Insect farming feeding food waste
- Disconnect between what people think ag is and what it actually is:
- Ag is hungry for
 - Automation
 - Large Data

- Biotechnology
- Robotic Tech
- Using innovative processing venues i.e. school kitchens as commercial production kitchens
- Vertical farming (controlled environment agriculture)
- Issue a challenge to get a solution
 - “Hack a thon”
- Toss out a problem and let groups work on ideas up to and including business plans
 - STEM directed to Agriculture
- The lack of broadband internet services was mentioned as a challenge for businesses trying to locate in otherwise suitable towns or rural areas.

Breakout Sessions Impediments / Challenges

There were three breakout sessions held after the general session. The breakout sessions lasted about 1 hour. The first topic for discussion was what impediments or challenges prevent optimization of Foods for Health in Missouri. The main comments and thoughts from all three sessions are compiled below.

- Communication: A common theme expressed from multiple angles was the lack of communication within the “space”. The space includes government, academia, processing and production.
- Need collaboration at the government level between departments (get out of silos)
- Collaboration on Research by Universities
 - Inter-Agency Hires
 - Regional pockets of expertise
- Lack of communication between the players in the space
 - Everybody chasing their own dollars
 - Competing Priorities
- Biofuels used as an example
- Commodity groups working very closely with regulators
 - Public/Private Incentives (We versus I)
 - All parties engaged from producer to regulators
- Industrial Supply Chain – Infrastructure
 - Storage
 - Are we going to grow production if we don’t have processing (Chicken versus Egg)?
 - Permitting challenges –Preselected siting with pre permitted for processing
- New consumer ideologies affecting farming practices
 - Need to define “Foods for Health”, “Nutrition Agriculture” and “Better for

- Planet” Sustainability) and “Less Processed Foods” (Value Added is Processing)
- Lack of Communication between research and producers
 - New crops are attractive but require different equipment & sales channels
- Any new crop or opportunity needs to be expressed in how it will impact the farmer.
- Farmers changing practices is difficult and they need to have a market
- Backlash in agriculture (producers, processors) when making significant production changes
- Maintaining margins after getting new concept started
- Matching market needs to supply
- Identity Preservation – High capacity processing not feasible
- Information about consumer behavior is lacking.
- Developed in Missouri does not stay in Missouri. “beyond meat”
- Gaps in Research in translating into new products and services
 - University is good at producing knowledge
 - Challenge in turning that into new products and services
- Funding (fed, state, private)
 - Industry funding has issues
 - Non-objective
 - “Holding” research
- Access to Capital – How do investments stay in Missouri
 - Access to Investment – Venture Capitalists and Production Agriculture
- Health food marketing methods/tactics (Inappropriate Marketing)
- Initiative is about food, not in supplements. Grow better food for humans or for animals.
- Align with health corridor
- Need to promote food science across higher ed.
 - Talent / Workforce
 - Shared Appointments
 - Share classes / workshops
- Tech Transfer – developers have a different model than those who use the developments
 - Public research institutions are more risk adverse than private industry
 - Current emphasis is for research that does not focus on introducing a new product or service to the market
 - ID of potential partners who will take IP to market
 - USDA (Office of Tech Transfer)
 - At Mizzou: Office of Tech Advancement

- Beyond Meat example
 - Alternative ways of gaining tenure?
- Food Waste (Up-Cycling)
- Broadband availability is an impediment to establishing smaller businesses in areas where it is not available
- Food for Health Institute (Consortium) (Innovation, Regulatory, Capital, Marketing) (Umbrella Type Organization) (Transition - brought up in impediments but probably fits better in opportunities.
 - Plants
 - Animals
 - Humans
- Disconnect between what people think ag is and what it actually is:
 - Ag is hungry for
 - Automation
 - Large Data
 - Biotechnology
 - Robotic Tech

Breakout Sessions – Opportunities – Low Hanging Fruit

- Multiple microclimates to try new concepts at appropriate scale
- Numerous Research & Agriculture Education Institutions in Missouri
- Vertical integration with collectives working together in a market – i.e. LSU cattle example (raising through feed out instead of selling as feeders).
- Need Agriculture / Business Incubation Center
- Invest in Science Research Innovation (Fast Track) - Hemp
- Promote Food Science education access all state institutions. Courses taught across all educational organizations
- Public Education – Promotion – Marketing of Specialty Crops, Organic
- Currently have expertise in Missouri but need to be brought together
- Provide Information / Education in this space
- Higher Ed & community colleges must talk & partner
- What is agriculture & teach that to younger kids
- Food Innovation Center that works with industry to demonstrate new ideas.
- Missouri Colleges of Ag Associations
 - Long Term Strategic Plan
 - Lofty, common goals
- MASBDA is Great!
- Processing facility for product testing. Example in Kansas
 - Safety processing

- Private label claim validation
- Building Bridge to USDA NIFA
- Explore other states activities
- Using innovative processing venues i.e. school kitchens as commercial production kitchens
- Missouri Dept of Economic Development create different set of standards for ag industry incentives
- Workforce Development
 - Veterinarians
 - Food Service
- Vertical Farming (controlled environment agriculture)
- Insect Farming (Feeding food waste)
- Issue Challenge to get a solution
- “Hack a thon”
 - Toss out a problem and let a group work on an idea up to and including a business plan
 - STEM to Agriculture
- Don’t target the big companies
- Plant science corridor – St. Louis to Columbia
- Animal science corridor – Columbia to Manhattan/St. Joe
 - Other checkoff organizations like USB (United Soybean Board)

2019.09.13, Jefferson City (Missouri Farm Bureau)

The subject of this session was “Regional Food Systems”. Approximately 70 people were in attendance, representing many aspects of production agriculture, particularly those who raise specialty crops and participate in niche markets. Industry and University Extension were well-represented as was state government (MDA). Below are topics that generated the most discussion.

Extension and Education

The Extension System has historically been a critical resource for agriculture. As budgets for Extension services has reduced over time, the breadth and depth of services offered has changed. Concerns related to Extension identified at this session include services offered not being relevant in a rapidly changing environment, hesitation to work with non-conventional agriculture, beginning and young farmers not having the support needed to achieve stability and lack of educational opportunities available to producers.

Areas identified that would establish more relevancy for Extension include working to connect the education of consumers (i.e., modern production practices, “seasonal” eating) with the education of producers (i.e., creating sound

business plans based upon realistic budgets (particularly related to specialty crops), how to access capital), new and beginning farmer education (including mentoring opportunities) and what common and unique hurdles need to be overcome when taking a product to market.

Regulatory Environment

The ability to establish county-specific health ordinances is seen as a challenge for producing and marketing farm-produced goods. There can be confusion from guidance received from the Missouri Health Department because the same rules/regulation can be interpreted differently by individuals both employed by the health department.

Additional resources that were deemed important by the group include understanding the rules and regulations at all jurisdictions for producing and offering niche products for sale. A local food safety location (i.e., a state “processing authority”) to act as a clearinghouse for food safety (including har-vest rules for processing), label verification, etc. is a need that many felt should be urgently addressed.

From a crop production standpoint, two issues were identified that were large risk factors for producing specialty crops. The first is unfamiliarity of neighbors using herbicides near specialty crops susceptible to drift and the general lack of crop insurance for specialty crops.

Labor

Discussion of labor was a common topic at essentially all listening sessions. A valid question raised at this session was “Who is going to take the jobs that are created if the initiatives do produce the additional jobs?” Listening session participants were enthused about the current initiative, but already see a lack of labor availability in many Missouri agricultural enterprises, including fruits and vegetables (more broadly defined as specialty crops) and meat processing. A participant mentioned that a workforce development study is going to take place to evaluate labor availability question. Work release for inmates was offered as a partial solution to the challenge.

While not explicitly related to the sourcing of labor, a factor that would somewhat reduce reliance upon labor is more universal access to broadband internet services. Without reliable broadband, labor saving devices and practices cannot be practically implemented and leveraged.

Cooperation

Cooperation defined here has two meanings: a marketing cooperative (i.e., the traditional agricultural “co-op”) and cooperation between supply chain participants, regardless of production practices. From a marketing cooperative standpoint, financial incentives for forming and operating a cooperative were deemed important. Size of marketing cooperatives was a valid question – are more “entrepreneurially-sized” or large-scale cooperatives needed/desired? Marketing cooperatives were also suggested as a method for establishing “food for sale” barns in which advance notice could be communicated on what produce would be offered for sale. These would be different than traditional farmer’s markets in that products would be required to meet certain grading standards so that larger buyers could confidently buy products that met their needs. The group felt that having this type of “barn” would also help with scale-up and help participants see a clearer path to longer-term, more stable markets.

Cooperation from a supply chain participant standpoint includes reducing the tendency to pit producers against each other based upon production practices, claims, etc. Cooperation in this context also means working more closely with those up and downstream from each other. Community “test kitchens” were also identified as important for proving and perfecting processes. These test kitchens could potentially be established in schools during off hours, renovated commercial space or commercial kitchens built specifically for functioning as a test kitchen. The challenge with test kitchens is the actual long-term management of hours of operation, tenants and complying with all relevant rules and regulations.

Value-Added and Supply Chain

Issues related to value-added products and supply chain management received a fair amount of discussion. Most agricultural producers do

not have expertise in this area and often find themselves frustrated at impediments, and in some cases, failure to successfully take their products to market. Supply chain issues blamed for most failures include logistics, limited or low access to capital due to lenders’ lack of understanding of specialty markets, lack of focus on a specific market segment (wholesale vs. retail), ill-informed market research and pricing, lack of understanding of the regulatory environment, limited success in making crucial connections with up and downstream supply chain participants and properly/efficiently packaging and labeling products.

Several ideas were offered to ease the identified issues, including the use of Extension to offer assistance to educate producers and business owners in prioritized areas, use of farmers markets to refine business plans and offering of “value-added” grants to help producers market and encourage processing of specialty products.

Recap of main points from all listening sessions.

Challenges

- Workforce
- Education
- Lack of connections or network
- Communications
- Technical assistance
- Access to capital
- Regulation clarity
- Co-packaging
- Chemical drift

Opportunities

- Distribution centers and hubs
- Marketing
- STEM education
- Fundraising
- Local processing authority and school
- Labor
- Access
- Financing